

2030 Curriculum Project (Pilot)

Call for Teaching Proposals, 2016-2017 Academic Year



BACKGROUND

The urban built environment is responsible for over 70% of all greenhouse gas (GHG) emissions worldwide. How we design buildings and cities today will determine if the effects of climate change will be manageable or catastrophic.

The historic agreement reached at the COP21 UN Climate Change Conference in Paris signals an end to the fossil fuel era. It commits nearly 200 countries – including the US, China, India, and EU nations – to keep the global average temperature increase to “well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C.” In order to meet this target, the world must reach zero fossil fuel CO₂ emissions in the built environment by about 2050, and zero total global GHG emissions between 2060 and 2080.

Municipalities all over the world are currently enacting strategic urban planning measures and adopting advanced building codes that will enable them to meet aggressive carbon reduction pledges. Students graduating from US architecture and planning programs in 2020 will enter a workplace in which designing for very low or zero carbon emissions will be standard practice.

Achieving zero emissions in the built environment is entirely possible, but it is not just about more efficient technology, better engineering, or meeting stringent building codes.

Fundamentally, it is a matter of design. It requires architects and planners to think creatively, critically, and holistically about how our buildings, cities, and urban spaces are conceived, shaped, constructed, and inhabited.

THE CALL

To best prepare future architects and urban planners to design a sustainable and zero-carbon world, Architecture 2030 is seeking a transformative intervention in design education.

We call upon educators to submit *innovative* teaching proposals that will firmly establish energy use, emissions, and resiliency as essential concerns of *all* design activity, evaluation, and dialog in professional degree programs in architecture, planning, and landscape architecture.

WHO MAY SUBMIT?

All faculty and program administrators of architecture, planning, and landscape architecture schools, at the undergraduate or graduate level

WHAT DOES INNOVATIVE SUSTAINABLE DESIGN EDUCATION LOOK LIKE?

In recent years, dramatic improvements in sustainable design education have been a result of the creative and resourceful efforts of individual faculty and department leadership. Yet, significant gaps still remain, especially between schools and across topic areas.

By expanding and fully integrating lessons in energy use, emissions, and resiliency into the widest range of projects, topic areas, and across all year levels, schools can:

- Foster earlier awareness and ongoing dialogue
- Position sustainable design concerns as integral to all aspects of designing buildings and urban places (planning, programming, form making, materiality, structure, facades, systems, construction, etc.)
- Establish performance, emissions, and resiliency as relevant modes of analysis and critique in all topic areas
- Expand the existing field of sustainable design aesthetics, theories, and approaches

Considerable opportunities exist to capitalize on the intrinsic freedom and experimentation of professional design programs. Schools are uniquely positioned to advance sustainable planning and design into exciting new territories, applications, and ways of thinking.

Innovation can be achieved *right now*, with courses that are currently being taught and within existing curricular structures. Examples include:

- Using available software to incorporate fundamental aspects of climate and energy analysis into all, and even the earliest, planning and design studios
- Reordering the sequence of required courses to introduce climate, resiliency, and environmental quality concerns earlier, e.g. environmental controls could precede structures in an architecture curriculum
- Integrating design studios and other courses within a year level, by providing instruction from faculty teams with diverse expertise
- Incorporating energy and emissions performance as part of historical analysis and in case studies of design or planning precedents
- Critically assessing and/or reimagining the aesthetics of sustainable planning and design
- Evaluating embodied carbon in materials & methods and structures courses
- Offering courses in US and/or global energy policy and history for architects and planners
- Developing economic case studies for sustainable and resilient planning, and zero carbon buildings

WHAT'S IN IT FOR ME? MY SCHOOL?

Participants in the 2030 Curriculum Project have the opportunity to make meaningful and influential changes in their courses and departments, and to transform the broader culture of sustainable planning and design education nationwide.

For proposals selected for this pilot program, Architecture 2030 will support your teaching efforts by:

- Reviewing and providing constructive feedback for proposed course syllabi and program/curricular changes
- Connecting faculty and departments to the latest software and training
- Continuing to expand the 2030 Palette (www.2030palette.org, see below) as a learning resource for sustainable design
- Connecting faculty and departments with local and regional experts and professionals for possible participation in design reviews and/or special lectures

We will also actively promote and share your contributions to innovative sustainable design education by:

- Promoting faculty, students, and programs participating in the 2030 Curriculum Project through our lectures, social media, and website
- Broadcasting successful teaching outcomes through these same channels, online partner media, peer-reviewed journals, and academic conferences and organizations
- Publishing content you develop as part of the 2030 Palette
- Connecting you to other participating faculty and programs, and sharing teaching resources, syllabi, and student work

WHAT ARE THE SELECTION CRITERIA?

Proposals must constitute a meaningful innovation in the way sustainability is currently addressed in design education at the applicant's institution. Preference will be given to proposals that:

- Expand sustainability concerns into course topics or year levels where this material is not adequately or has not traditionally been addressed or integrated into design
- Address changes in required or core classes, though proposals for electives with broad appeal will be considered
- Integrate use of the 2030 Palette as teaching tool, design resource, and/or outlet for sharing quality research and content generated by proposed coursework
- Propose novel approaches to the ways in which sustainable design concerns are presently considered and applied
- Are models for improved instruction in your program and other professional degree programs nationwide

HOW DO I APPLY?

Please submit the following material to be considered for the 2030 Curriculum Project:

- Proposed syllabus and schedule for course offerings in the 2016-2017 academic year – identify learning objectives, specific exercises and/or proposed outcomes, digital tools, and learning resources
- Cover letter – explain how your coursework proposal satisfies the selection criteria outlined above and will create meaningful change in your program's curriculum
- Curriculum vitae – of faculty member(s) or program administrator submitting the proposal

Submit all materials to curriculum@architecture2030.org. **[UPDATED] The deadline for submittals is January 3, 2017.** Applicants with proposals selected for the 2030 Curriculum Pilot will be notified beginning **January 5, 2017.**

Questions about the 2030 Curriculum Project? Email curriculum@architecture2030.org or call Anthony Guida, Program Manager at (505) 988-5309.

WHAT IS ARCHITECTURE 2030?

Architecture 2030 is a non-profit, non-partisan, and independent organization whose mission is to rapidly transform the building sector from being the major contributor of global GHG emissions to a central part of the solution to the climate change problem.

In 2003, Architecture 2030 defined the connection between climate change and the global built environment, recognizing that buildings are responsible for 48 percent of total US energy consumption and GHG emissions, and 77 percent of total US electricity consumption. In 2006, Architecture 2030 issued the 2030 Challenge, calling for a 70 percent reduction in energy consumption for new buildings today, and incrementally increasing energy reduction to carbon neutral by 2030. The 2030 Challenge has since been adopted by the American Institute of Architects (AIA), 50 percent of all US architecture firms, and nearly 75 percent of the top 30 international architecture, engineering, and planning firms, helping drive a global shift towards achieving dramatic reductions in energy consumption and emissions.

WHAT IS THE 2030 PALETTE?

The 2030 Palette is Architecture 2030's free online tool for the design of low-carbon/zero-carbon and adaptable built environments worldwide. It was created to assist design students and professionals in meeting the targets of the 2030 Challenge.

The 2030 Palette presents sustainable planning, landscape, and architectural design principles and actions through an interconnected collection of *Swatches*. Swatches are complemented by images of built work, in-depth information pages, and exhaustive links to additional resources. Users may also create custom palettes, publish content, and share ideas with others in their network.

Several analysis tools already connect to the 2030 Palette, such as UCLA's Climate Consultant. Autodesk's Insight 360 and Sefaira Architecture will directly link to the Palette soon. Architecture 2030 continues to expand the 2030 Palette through new swatches and in-depth information pages, and we will soon be publishing content generated by expert users.

LINKS

<http://architecture2030.org/>
<http://www.2030palette.org/>